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COMMENTS Neil -

I would appreciate any comments you may have on the draft. In addition, if you could answer the questions in [bold]. Thank you.

Lena

Success in Brief

CLEANING UP THE COLBERT LANDFILL -- A COMPREHENSIVE APPROACH TO ENVIRONMENTAL RESTORATION

The United States Environmental Protection Agency's (EPA) Superfund program has been tasked with cleaning up the nation's uncontrolled or abandoned hazardous waste sites. This task includes identifying the types of contamination present at a site, and choosing a cleanup method to address this contamination. However, a successful cleanup entails much more than this in the eyes of the Agency. In the case of the Colbert Landfill, EPA:

- ~~Provided~~ Saw that an alternative water supply was provided for the residents whose drinking water was contaminated; **[Please verify if this was EPA or County, State and Key Tronic.]**
- Identified site polluters and reached an agreement with them to repay EPA for the money spent on the site investigations and pay for their part of the comprehensive cleanup actions;
- Supervised the polluters' ~~innovative~~ approach to the design and construction of the selected cleanup method; and
- Worked closely with the community to address their questions and concerns regarding the cleanup actions at the site.

(Alt. water was designed, built and paid for by the PRPs.)

The Site Today

The contaminated ground water is being ~~contained~~ monitored to ~~prevent the~~ identify any further spread of contamination and impact to residential wells while the treatment system is being constructed. The system is under construction and is expected to be operational by late 1993, at which time the actual treatment of the contaminated water will begin. The polluter has paid for municipal water lines to be extended to the affected community to provide a supply of safe drinking water.

EPA continues to work closely with the Colbert community to keep them informed of activities at the site, and to address their concerns.

A Site Snapshot

The Colbert Landfill, which occupies 40 acres, lies two miles northwest of the city of Colbert in Spokane County, Washington. A population of about 1,500 people live within three miles of the now inactive landfill, and the Little Spokane River is only 1/2 mile from the site. **[Is it threatened by contamination? Ecological concerns?]** one of the contaminate plumes is moving towards the river, however, contaminated groundwater has not made an mean impact on it.

The site primarily received municipal and commercial wastes while it was active. However, for a period of approximately five years, a variety of contaminated liquid organic solvant wastes were dumped in open trenches at the site. These wastes contaminated the soil and the ground water with a variety of chemicals primarily the ~~including such~~ volatile organic compounds (VOCs) ~~as~~ trichloroethane (TCA) and methylene chloride. (These chemicals are used as cleaning solvents in numerous industrial processes.) Although both soil and ground water were affected by these wastes, the contaminated soil only posed a threat through direct contact. To prevent accidental contact with the contaminated soil, two feet of clean soil was placed over the entire landfill.

The most direct threat from the site contamination is the ~~polluted~~ contaminated ground water that flows under the site. The ground water is a direct source of drinking water for the neighboring community. Sampling of the wells in the area revealed ~~the presence~~ levels or concentrations of TCA in the water at levels that made it unsafe to drink. **[Was the drinking water contaminated with anything else?]** (not very important) Ingestion of TCA is linked to liver damage in both humans and animals, however no health problems related to site pollution have been reported. **[Is this correct?]** yes

[Sampling of the wells in the area revealed that the presence of TCA in the water at levels that made it unsafe to drink. Decked quote] + see revised wording

EPA Aids Local Officials in Addressing Landfill Contamination

Alerting Environmental Officials -- The Community's Role

Spokane County owned and operated the Colbert Landfill as a municipal landfill beginning in 1968. For a five year period, from 1975 to 1980, KeyTronic Corporation and Fairchild Air Force Base disposed of a variety of used solvents at the site. In 1980, local community members complained to the Eastern Regional Office of the Washington Department of Ecology (Ecology) that industrial wastes were being dumped from barrels into open trenches and allowed to mix with the soil and ordinary municipal wastes. The community's concern prompted Ecology to act.

The federal government had just enacted the Superfund program to address the increasing problems at abandoned or uncontrolled hazardous waste sites throughout the nation. Ecology was quick to take advantage of the new program and called in EPA to provide funds for Ecology and Spokane County to take samples at the site and in the surrounding area, and determine the possible dangers. The results -- the samples revealed TCA contamination in the ground water at the site and in drinking wells in the surrounding area. The recommendation -- the County Health District told ~~the~~ several local residents not to drink from their wells. The next step -- the residents began ~~buying~~ obtaining bottled drinking water (for which they were later reimbursed), and Spokane County began a preliminary investigation of the ground water contamination to determine its source.

Investigation Reveals a Serious Threat

This preliminary investigation revealed that ~~site polluters were the source of the contaminated drinking water~~ the landfill was the source and that volatile organic chemicals were migrating (leaching) from the landfill causing the contamination of drinking water. EPA felt that the site threatened the surrounding community and environment and proposed it for inclusion on the National Priorities List

(NPL), the EPA's roster of the most serious uncontrolled or abandoned hazardous waste sites. Sites that are listed on the NPL are eligible for cleanup activities funded by the federal government through the Superfund program. In addition, EPA began a search to identify the parties responsible for the problems at the site so that those responsible they could clean them up. Early results of this search revealed three responsible parties, the County of Spokane, KeyTronic and the Fairchild Air Force Base. In 1983, Spokane County and KeyTronic took over the responsibility of providing bottled water to residents whose wells had been contaminated.

Once the site was officially added to the NPL in September of 1983, EPA began the process of achieving a comprehensive cleanup. First, EPA began negotiations with the polluters to begin conduct an intensive investigation of the nature and extent of the site contamination. While EPA was conducting these negotiations Ecology decided to begin the investigations to avoid any delay in the cleanup process. Second, in 1984, EPA contracted with Ecology and provided Superfund money to Ecology for extensive sampling of the contamination at the site and an analysis of the cleanup methods that would best address the problem. That same year the Spokane County, ~~State~~ and KeyTronic provided bottled water to those residents whose wells showed contamination and, in 1985, ~~EPA~~ the County and KeyTronic paid to have the public water supply permanently extended to the residents. After Ecology completed its comprehensive studies of the site, EPA used the results to propose its cleanup plan to address site contamination.

[Local community members' complaints that industrial wastes were being dumped prompted Ecology to act. Decked quote]

Enforcement Works -- Getting the Polluter to Pay

In 1986, the Colbert Landfill was officially closed and covered with two feet of clean soil, which was the accepted landfill closure practice at the time. EPA selected its cleanup plan

for the site in September of 1987. Subsequently, EPA and Ecology began negotiations with the identified polluters to determine whether they would pay for and perform the comprehensive cleanup actions at the site. In January 1989, an agreement was reached. KeyTronic and Fairchild Air Force Base agreed to pay a portion of the cleanup costs into a "trust fund" that would be used to finance the cleanup activities. Spokane County agreed to conduct the cleanup actions under EPA's supervision, including ongoing ground water monitoring and operation and maintenance of the selected treatment method.

KeyTronic deposited $4.2 million, and Fairchild Air Force Base deposited $1.45 million into the trust fund. EPA and Ecology agreed to contribute $2.2 million towards the cleanup costs, which they plan to recover at a later date from those polluters who did not enter into the agreement. This combined $7.85 million will be used to design and construct the ground water treatment system.

Cleanup Construction Begins -- A New Twist to a Proven Method

Less than one month after the agreement between the polluters, Ecology, and EPA was approved, construction of the ground water treatment system began. The polluters installed pilot extraction wells at 3 ~~throughout the site to intercept the contamination before it spread any further~~ test the conceptual design and obtain design information. These wells will also be used to extract ground water for treatment. Also, the polluters began constructing the facilities needed to test the effectiveness of the selected cleanup method. This method, known as a pump and treat system, entails pumping contaminated water from the ground into a ~~40 foot~~ air stripping tower. The tower strips the contaminants from the water and releases them into the air. Once in the air, the volatile organ ~~The air causes the contaminants to evaporate~~ disperse and can be biodegraded. The clean treated water will then be discharged into the Little Spokane River.

Included in the agreement with EPA and Ecology, the polluters were required to conduct

ongoing sampling of the residential wells in the area to ensure that the community continued to have a safe water supply. The wells would be tested four times a year. If the results showed contamination, the polluters would pay to have that residence hooked up to the municipal water supply.

To speed the cleanup, the polluters divided it into smaller tasks, which were tackled concurrently. This proved faster than designing the entire cleanup -- extraction wells, treatment system, and monitoring program -- before starting any of the construction. Once the residential well sampling program was approved, sampling began immediately. As the polluters decided on the location of the extraction wells, they were installed. Simultaneously, both design and testing of the treatment system were done. This new twist allowed the polluters to complete the installation of the ground water monitoring and extraction wells in just eight months. At this point construction on the test air stripper tower began. The tests showed the air stripper would work. The construction of the final ground water treatment system is expected to be complete in ~~mid-1994~~ by Dec 1994. The ground water will be treated for ~~[How long?]~~ until it no longer is determined to be a risk to human health or the environment

After the ground water treatment system is constructed, the polluters will place a protective ~~cover~~ cap over the site that meets the requirements set by the State of Washington. Finally, the site will then be seeded for grass.

Easing Community Concerns -- A Program Goal

A toxic waste site? In my back yard? My water is contaminated? Answering these questions, frequently heard from the community members that live near hazardous waste sites, is a priority of the EPA's Superfund program. To address these types of questions and concerns, EPA develops a community relations plan for each site. This plan includes scheduling public meetings and developing fact sheets to update the community at key

points during the site cleanup. In addition, public comment periods are scheduled throughout EPA's decision making process to ensure that the community has the opportunity to express their opinions on the proposed cleanup remedies, and work with EPA to arrive at a cleanup plan that addresses their needs.

Many communities work closely with EPA throughout the life span of the site cleanup. The residents of/Spokane Valley were that kind of a community. It was a community resident ~~of Spokane Valley~~ that first alerted the officials to the ~~illegal~~ dumping at the site. From the onset, ~~Spokane County~~ worked closely with the residents to inform them of the actions taking place at the site, distributing fact sheets and ~~holding~~ seven public meetings in two years to explain each phase of the studies that were being conducted at the site.

Even so, local residents were not satisfied with the County's actions, so the community took control of the situation. In the fall of 1985 they formed the Colbert Landfill Cleanup Action Committee (CLCAC). CLCAC's main function was to collect and distribute information about the actions begin taken at the site to the residents in the local area. In addition, CLCAC also presented several requests to the County officials, including extending municipal water hook-ups to affected homes, and comprehensive monitoring of the wells in the area in the future.

[A toxic waste site? In my back yard? My water is contaminated? Answering these questions, frequently heard from the community members that live near hazardous waste sites, is a priority of the EPA's Superfund program. Alternate decked quote]

EPA and Ecology Take the Helm

Since there was some contention between the residents and local officials, EPA and Ecology decided to take the lead in working with the community. They met frequently with the community members from 1985 to 1987 to explain the cleanup process, and distributed the proposed cleanup plan for the community's review. After distributing the cleanup plan, EPA and Ecology held a public meeting to discuss the options outlined in the plan. Close to 200 residents showed up at the meeting. The community voiced several concerns about the short time frame for the public to comment on the cleanup plan which was extended. They also feared air pollution from the proposed air stripping remedy. In addition, the ~~community~~ identified polluters wanted EPA to conduct a search for additional polluters. ~~[Did EPA ever conduct this second search? What was the purpose of this search?]~~ One non-settling party was identified and EPA has filed a cost recovery action against them.

EPA Changes Its Ways to Address Community Concerns

EPA reacted quickly to these concerns. The public comment period was extended; additional public meetings were scheduled to further discuss the comments and concerns about the air stripping tower; EPA and Ecology conducted interviews with residents to update the community relations plan and to assure that it met the community's needs; and fact sheets were issued regularly to keep the community informed of cleanup progress. EPA welcomed the community's participation. A September 1989 fact sheet stated, "The citizens should be commended for their tireless efforts in reviewing site documents, being on work groups, and participating in public meetings held by the governmental agencies ...."

Community Member's Participation Makes Headlines

From the start of EPA involvement with the Colbert Landfill, one resident took on the responsibility for "promoting communications among residents and various government

agencies," says an EPA Regional community relations coordinator. This resident was (b) (6). For his efforts and involvement (b) (6) was given EPA's Citizen Participation Award for helping Superfund cleanups. **[How many have these awards have been given in the Region? In the nation?]** EPA was honored to show their appreciation to (b) (6) for his active participation in cleanup efforts at the Colbert Landfill site by presenting him with the award. **["The citizens should be commended for their tireless efforts in reviewing site documents, being on work groups, and participating in public meetings held by the governmental agencies ...." Decked quote]**

Only 2 such awards have been given by Region 10, the initiator of this award.

Ecology also recognized Mrs. (b) (6) for her active role during the Ecology lead studies (RI/FS). (b) (6) preceded (b) (6) as chair of the CLCAC. Both of these individuals contributed a great deal of effort in assisting EPA and Ecology be more effective with the community.

Success at Colbert Landfill

The ground water contamination has been ~~contained~~ delineated and operation of the ground water treatment facility will begin in 1993. The community's concerns about the proposed cleanup actions have been addressed thanks to the efforts of EPA and Ecology. The polluters are paying for and conducting the design and construction of the cleanup remedy under EPA supervision, and the polluters have extended municipal water lines to the affected wells in the area. Ongoing monitoring of residential wells will ensure that the community continues to be assured a safe water supply while the contaminated ground water is treated. **[When is the ground water expected to be cleaned up?]**

Colbert Landfill

Site Description: An inactive municipal landfill in Spokane County, Washington

Site Size: 40 acres

Primary Contaminants: Methylene chloride (MC), and volatile organic compounds (VOCs) such as trichloroethane (TCA)

Potential Range of Health Risks Without EPA Cleanup: Ingestion of TCA is linked to

liver damage in both humans and animals, however no health problems related to site pollution have been reported. **[What are other health effects?]**

Ecological Concerns: None

Nearby Population: 1,500 people within three miles

Year Listed on the NPL: 1983

Region: X

State: Washington

Congressional District: 05

Simplified Timeline

1968	Colbert Landfill is opened
'75-'80	KeyTronic and Fairchild Air Force Base dump used solvents/Local community member informs Ecology of the dumping/Superfund is enacted/Ecology and Spokane County begin preliminary studies of the site
'83	Site is included on the National Priorities List/Ecology begins extensive sampling of site contamination
'84	Bottled water is provided to residents with contaminated drinking water
'85	Colbert Landfill Cleanup Action Committee is formed/EPA Extends the public water mains to 135 residents
'86	Landfill is officially closed
'87	EPA selects the cleanup method/EPA and the polluters begin negotiations for the design and construction of the cleanup actions
'89	KeyTronic and Fairchild Air Force Base agree to pay for the cleanup actions, Spokane County agrees to pay for and conduct the cleanup actions/Construction of the cleanup method begins
'93	Construction of cleanup method complete
'94	Protective cover installed and seeded for grass

[When is the residential well monitoring program and the ground water treatment scheduled to be completed?]

The residential well monitoring program will be blended into the long term monitoring requirement for the site. The operation and maintenance program will be submitted after the treatment plant is fully operational.